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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,436	10/02/2003	Lifeng Zhang	A01449	9011
21898	7590	01/12/2007	EXAMINER	
ROHM AND HAAS COMPANY PATENT DEPARTMENT 100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399			ISSAC, ROY P	
		ART UNIT		PAPER NUMBER
				1623
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	01/12/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/677,436	ZHANG, LIFENG
	Examiner Roy P. Issac	Art Unit 1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 November 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 4-9 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3 and 10-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/28/2006, 3/26/2004 & 1/06/2004.

## **DETAILED ACTION**

This application claims priority under 35 U.S.C § 119(e) from the provisional application 60/417,854 filed 10/11/2002.

### ***Election/Restrictions***

Applicant's election of Group I in the reply filed on 03 November 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The restriction requirement between Inventions I and II was deemed proper and is therefore made FINAL.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria

for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112.

Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b).

Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues.

See MPEP § 804.01.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Ma et. al. (ACS Symposium Series, 765, 2000, 254-270; PTO-1449, Included by the applicant).

Ma et. al. discloses complexations of beta-cyclodextrin with hydrophobically modified ethoxylated urethanes (HEUR). (Abstract). Ma et. al. discloses the use of diisocyanate groups. (Page 261, Paragraph 2-3). Ma et. al teaches that stronger interaction between beta-cyclodextrin and thickeners is seen as the terminal hydrophobe size increases. HEURs are reported to displace phenolphthalein from cyclodextrin cavity. (Page 262, Paragraph 1).

The recitation, "for a reduced viscosity hydrophobic thickener system for thickening a polymer-containing aqueous system" is considered an intended use of the composition. Note that it is well settled that "intended use" of a composition or product, e.g., "topical skin care composition", will not further limit claims drawn to a composition or product, so long as the prior art discloses the same composition comprising the same ingredients in an effective amount, as the instantly claimed. See, e.g., *Ex parte Masham*, 2 USPQ2d 1647 (1987) and *In re Hack* 114, USPQ 161.

The recitations "wherein at least a portion of said cyclodextrin-containing compound is complexed with said hydrophobically modified associative thickner in such a ways that at least a portion of at least one said phobes at least partially fills said hydrophobic cavity" is considered a functional recitation of an inherent property of the composition. The compositions of Ma are expected to have the same properties because it consists of compounds recited in claims herein.

As such, claims 1-3 are deemed anticipated by Ma et. al.

Claims 1-2, 10-11 and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lau W., et. al. (U.S. Patent No. 5,376,709; PTO-1449; Included by the applicant).

Lau et. al. discloses a method for reversibly suppressing the viscosity of an aqueous solution containing a hydrophobically modified thickener by complexing hydrophobic moiety with methyl-beta-cyclodextrin. (Abstract). Example 1 discloses a composition in which cyclodextrin is 4.9%, and contains Acrysol-RM-8, hydrophobically modified polyurethane thickener. Lau et. al. discloses the use of 17.5g solid grade RM-8 in a composition of 100g, resulting in a 17.5% (weight) composition. (Example 1, lines 62-68). As such, claims 1-3, 13-18 and 20 are deemed anticipated by Lau et. al.

Claims 1-2 and 10-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Eisenhart et. al. (U.S. Patent No. 5,137,571; PTO-1449, Included by the applicant).

Eisenhart discloses a method for improving thickeners by complexation of cyclodextrin with hydrophobic moieties on the thickener molecule. Eisenhart discloses 0.5 to about 2% cyclodextrin. (Column 4, line 68). Eisenhart discloses solid content of 3% (Example 1; Column 7, lines 5-32), 8% solids (Example 5; Column 9, lines 28-31), and Acrysol RM-5 that contains 30% solids. (Table 18,

Column 15, lines 5-10). Eisenhart discloses the use of polyethoxylated urethanes, and hydrophobically modified polyacrylamides. (Column 15, lines 40-50). The QR-708 thickner used in example 1 appears to be an ethoxylated polyurethane thickner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 10-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisenhart et. al. (U.S. Patent No. 5,137,571; PTO-1449, Included by the applicant) in view of Ma et .al. (PTO-1449; Included by the applicant).

The disclosure of Eisenhart is discussed above.

Eisenhart et. al. does not expressly disclose the use of a diisocyanate group for binding to cyclodextrin.

The disclosure of Ma et. al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a polyethoxylated urethane thickener, in particular a thickener with a diisocyanate functional group to bind to cyclodextrin.

One of skill in the art would have been motivated to use hydrophobe terminal, in particular diisocyanate to improve the binding of cyclodextrin to the thickener because the method of using hydrophobic terminus and in particular diisocyanate is well known in art and disclosed in Ma et. al., and the use of the particular polyethoxylated urethane thickener in the particular ranges claimed herein is disclosed in Eisenhart et. al.

One of reasonably skill in the art would have expected the use of a hydrophobic terminus, in particular diisocyanate would have had improved thickener properties.

As such, the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roy P. Issac whose telephone number is 571-272-2674. The examiner can normally be reached on 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia Anna Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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